Monte-Carlo tree search enhancements for one-player and two-player domains

STATEMENTS

belonging to the dissertation
Monte-Carlo Tree Search Enhancements
for One-Player and Two-Player Domains
by Hendrik Baier

1. Nested Monte-Carlo Tree Search is an effective generalization of MCTS for one-player games, especially with longer time settings (this thesis, Chapter 4).
2. Beam Monte-Carlo Tree Search is an effective generalization of MCTS for one-player games, especially with shorter time settings (this thesis, Chapter 5).
3. Embedding $\alpha\beta$ searches into MCTS can lead to better play in two-player games, even without an evaluation function (this thesis, Chapter 7).
4. Using $\alpha\beta$ searches to provide prior knowledge for MCTS can result in a stronger player than either $\alpha\beta$ or MCTS on their own (this thesis, Chapter 8).
5. People talking about AI in public are either very enthusiastic because they don't know AI, or very afraid because they don't know AI.
6. AI is the science of programming skills we have but don't understand; game AI is the art of having fun in the process.
7. All of science is like MCTS: You exploit existing knowledge, explore in a promising direction, go on a semi-random PhD trajectory, and in the end any outcome is a contribution.
8. "Great research universities must insist on independence from government and on the exercise of academic freedom." Alan Dershowitz
9. All work and no play makes Jack an uninspired game AI researcher.
10. It takes a village to raise a PhD.
11. Don't believe everything you think.